

Appl. No. 09/652,820
RCE Submission dated Dec. 9, 2004
Reply to Final Office Action of Sept. 9, 2004

Amendments to Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claims 1-15 (cancelled).

Claim 16 (previously presented): An image processing method for recovery of a scene structure from successive image data where motion of the scene structure is linear, the method comprising the steps of:

- (a) computing rotational motion in the successive image data using rotational flow vectors derived from a set of intensity data collected from the successive image data;
- (b) constructing a shift data representation for the intensity data that compensates for the rotational motion in the successive image data;
- (c) decomposing the shift data representation into a motion vector and a structure vector;
- (d) dividing the successive image data into smoothing windows; and
- (e) computing a projection matrix which is block diagonal between different smoothing windows and which is used to recover the scene structure by solving for the structure vector.

Claim 17 (previously presented): The image processing method of claim 16 wherein the shift data representation is decomposed using singular value decomposition.

Claim 18 (previously presented): The image processing method of claim 17 wherein singular value decomposition is used to compute a rank-1 factorization of $-\Delta_{CH} \approx M^{(1)}S^{(1)r}$ where $M^{(1)}$ is the motion vector and $S^{(1)}$ is the structure vector.

Claim 19 (previously presented): The image processing method of claim 16 wherein the method is iterated until it converges to a reconstruction of the scene structure.

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Claim 20 (previously presented): A device-readable medium comprising instructions for performing an image processing method for recovery of a scene structure from successive image data where motion of the scene structure is linear, the method comprising the steps of:

- (a) computing rotational motion in the successive image data using rotational flow vectors derived from a set of intensity data collected from the successive image data;
- (b) constructing a shift data representation for the intensity data that compensates for the rotational motion in the successive image data;
- (c) decomposing the shift data representation into a motion vector and a structure vector;
- (d) dividing the successive image data into smoothing windows; and
- (e) computing a projection matrix which is block diagonal between different smoothing windows and which is used to recover the scene structure by solving for the structure vector.

Claim 21 (previously presented): The device-readable medium of claim 20 wherein the shift data representation is decomposed using singular value decomposition.

Claim 22 (previously presented): The device-readable medium of claim 21 wherein singular value decomposition is used to compute a rank-1 factorization of $-\Delta_{CH} \approx M^{(1)}S^{(1)r}$ where $M^{(1)}$ is the motion vector and $S^{(1)}$ is the structure vector.

Claim 23 (previously presented): The device-readable medium of claim 20 wherein the method is iterated until it converges to a reconstruction of the scene structure.